

Appendix B: Host connectivity

Host connectivity options provide an IVR application with the ability to interface with several types of host computers over a number of different topologies. IVR 2.0/I supports the following host communication environments:

- IBM 3270/SNA over SDLC
- IBM 3270/SNA over Token Ring
- IBM 5250/SNA over SDLC (also referred to as APPC or LU6.2)
- IBM 5250/SNA over Token Ring (also referred to as APPC or LU6.2)
- VT100

The IVR system emulates 3270 and 5250 through the use of software called Express from Apertus.

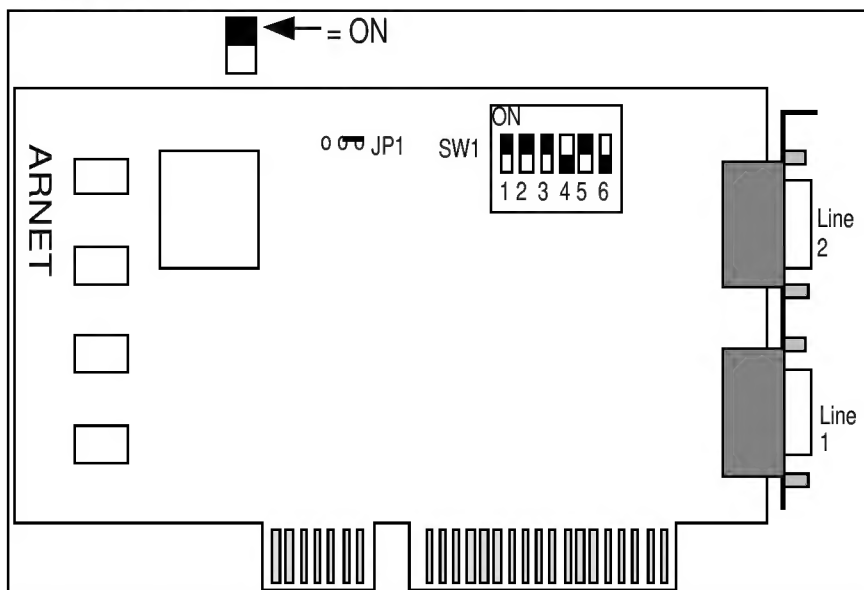
IBM 3270 emulation characteristics

Express provides full emulation of IBM 3174 cluster controllers and their attached 3178/3179 terminals for access to host environments such as MVS, VM, and VSE. Express emulates IBM 3270 display station models 1, 2, 3, 4, and 5 and provides screen presentation spaces ranging from 12 rows by 40 columns to 27 rows by 132 columns. It also supports seven colors; extended highlighting features and full status display. Express uses LU1, LU2, and LU3 in support of 3270 emulation.

3270/5250 SNA/SDLC card

The Arnet SYNC/570 card is used for connectivity to the host using SNA/SDLC. The Arnet SYNC/570 is a high-performance expansion board which connects into an ISA expansion slot and contains 2 communication ports. Included with the Arnet SYNC/570 adapter are 2 cables (9 pin male to 25 pin male) for attaching to line 1 and 2 of the adapter. Also included is a loopback connector for diagnostics. The two ports of the SYNC/570 each have a high density DB-15 connector to connect any device with an EIA-232-D interface to the computer. The board operates at line speeds from 4800 baud to over 115K.

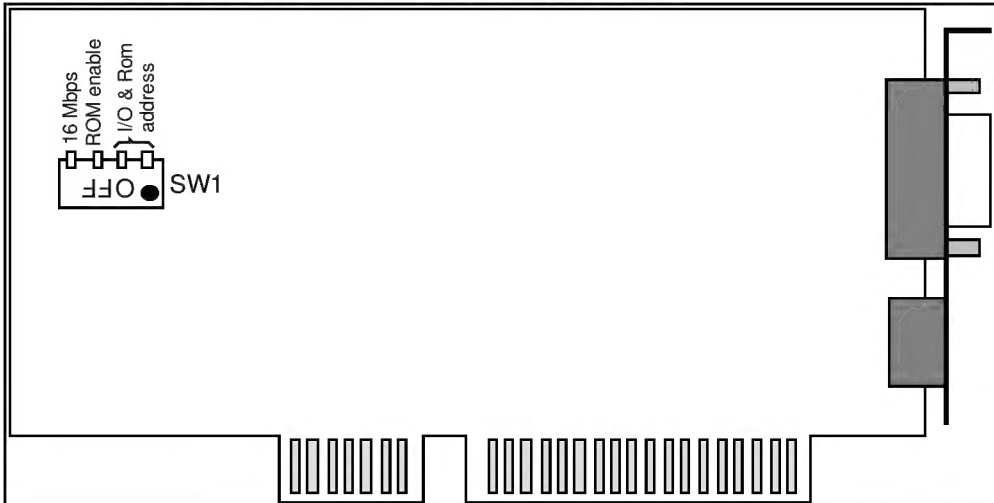
Figure B-1
ARNET SDLC card



3270/5250 Token Ring card

The Madge Smart 16/4 AT Plus Ringnode card is used for connectivity to the host using Token Ring.

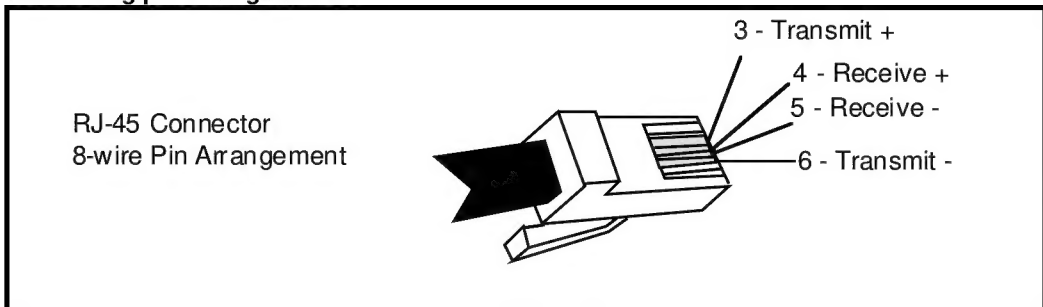
Figure B-2
Madge Smart 16/4 AT Plus Ringnode token ring host card



The LED indicators on the back of the card have the following indications:

LED	Function
Yellow	Indicates the NIC is inserted into the Token Ring.
Green	Indicates data is passing through the NIC.

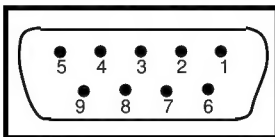
Figure B-3
Token Ring pin arrangements



9-Pin connector pinouts

The 9-pin “D” subminiature STP cable pinouts on the Network Interface card consist of the following:\

Figure B-4
Subminiature STP cable pinouts



Pin	Cable	Signal
1	Red	Receive+
5	Black	Transmit-
6	Green	Receive-
9	Orange	Transmit+

Pins 2, 3, 4, 7, and 8 are unused. The connector shield grounds the chassis.

Configuring 3270 for SDLC host communications

The Express software pre-defines a user called express in the Express database. When configuring the hosts communications software, the root log in can be used.

- 1 Log into the AP as root.
- 2 Enter the root password at the prompt.
- 3 The `/etc/profile` file contains all the commands which are executed upon login for all non-root users.
- 4 To allow root to have all the environment variables set up which normal users will have, enter the following command:

`./etc/profile`

- 5 The Express software automatically starts at boot time and must be started before the configuration can be accomplished.
- 6 To verify that it has started, enter the following command:

express_adm check

The system displays the following screen:

```
# express_adm check
(c) Copyright 1989,1992 Apertus Technologies Incorporated.
All Rights Reserved. Restricted Rights Legend: Use,
duplication, or disclosure by the government is subject
to restrictions as set forth in subparagraph (c)(1)(ii) of
the Rights in Technical Data and Computer Software
Restricted Rights clause at DAFRS 252.227-7013 and/or the
Commercial Computer Software Restricted Rights clause at
FAR 52.227-19(c). Apertus Technologies Incorporated, 7275
Flying Cloud Drive, Eden Prairie, MN 55344 U.S.A.

agent running:
  root    502      1  0 10:15:08  ?          0:00 agent
executive running:
  root    498      1  0 10:15:05  ?          0:00 executive
watchdog running:
  root    504      1  0 10:15:08  ?          0:00 watchdog
cdmserver running:
  root    367      1  0 10:14:51  ?          0:07 cdmserver      nortel:/u/express/db/cdmstst

Checking EXPRESS database divisions ...
Checking EXPRESS clients ...
```

Four daemons should appear in the running state. If the information above does not display, then express is not running. The express software may be started with the following command:

express_adm start

- 7 Begin the Express configuration by entering the following command:

express -c -u express

If the error “express: not found” appears, issue the command in step 5 above (. /etc/profile).

If the error is:

- initializing display capabilities...
- terminal type 'ansi' not defined for user 'express' in the EXPRESS database.
- DCINIT failed...EXPRESS terminating

then the terminal type is not set up for your log in session. The valid terminal types available for Express can be obtained with the following command:

ls_screens -u express?

Set the terminal type to a valid terminal type using the following command:

TERM=vt220;export TERM

8 The system displays the following screen:

```
Initializing display capabilities...
Retrieving database information for express.....
```

```
-----EXPRESS Global Options-----
      Welcome to EXPRESS
This first time that you run EXPRESS, you are asked to
select initial
values for global parameters and options. You are also
asked to
characterize your planned usage of EXPRESS features.
EXPRESS
will then make available just those tasks and displays
you need to
utilize these selected features.
You may change this information later through Set Global
Options.
```

```
=====
-  OK  -
=====
```

9 Press <Enter> to display the following screen. This screen only appears the first time express is run.

```
-----EXPRESS Global Options-----  
An EXPRESS domain is a single computer or a group of  
networked  
computers on which EXPRESS is installed. EXPRESS provides  
central, domain-wide operation and administration.  
Please enter the following domain identification. This  
information  
is attached to configuration backups and communication  
traces.  
It is also the default SNA Node identification.  
Domain Name: [ ]  
Location:    [ ]
```

- 10 The Domain Name and Location are not required for a stand-alone configuration (they are required for a network configuration), but since the information will appear in traces, enter a meaningful name such as the name of this company for the domain name and press <Enter>.

- 11 The following screen appears:

```
-----EXPRESS Desktop Features-----  
Please select the features of the EXPRESS Integrated  
Desktop that you plan to use.  
  
Terminal Emulation    Other Services  
[*] 3270 Display      [ ] Remote Job Entry  
[ ] 3270 Printing     [ ] CPI-C Transaction Programs  
[ ] 5250 Display  
  
=====      -----      -----  
~Continue~    ~ Options...~    ~Security...  
=====      -----      -----
```

- 12 Press Space to place an asterisk in the 3270 Display selection.

Press <Enter> to proceed to the next screen.

```
-----EXPRESS Desktop Features-----
Please select the following Server types that
EXPRESS Integrated Desktop will use.

[*] EXPRESS
[ ] Netware for SAA
[ ] Telnet Host

=====
- Continue -
=====

-----
- Back -
-----
```

- 13 Ensure the asterisk is in the EXPRESS selection and then press <Enter> to proceed to the following screen.

```
-----EXPRESS Server Features-----
Please select the features of the EXPRESS SNA Server
that you plan to use.

[ ] LU 6.2 - Needed for CPI-C, 5250, and IP/LU6.2
[ ] X.25 - Needed for QLLC, XLI, X.PAD, and IP/X.25
[ ] IP Router - Needed for IP/LU6.2 and IP/X.25

Please select the client types supported by the
EXPRESS SNA Server.

[*] EXPRESS
[ ] Telnet 3270/5250
[ ] Netware for SAA

=====
- Continue -
=====
```

- 14 Make sure the asterisk is in the EXPRESS selection and press <Enter> to proceed to the next screen.

[-] File Edit Preferences Window Task Help

```
-----EXPRESS Manager-----
Personal
Status      1. Control and Administration
Menu:        2. Server Configuration
<Esc><Ent>    3. Desktop Configuration
Cancel:
<Ctrl>^
Alt Key:
<Esc>q
ShellEsc:
<Esc>!
```


Notes:

- 1** If any of the parameters which initially displayed need to be changed, they can be found under the Set Global Options menu selection of the Preferences menu item.
- 2** The layout of the EXPRESS Manager screen contains the function of the keys to the left of the vertical line, three selections to the right of the vertical line, and menu item selections along the top. The function keys which display to the left of the vertical line will vary depending on which terminal is being emulated during this configuration. The meanings of the function keys in the example above are:
 - <Esc> then <Enter> = allow using the Menu
 - <Ctrl+^> = cancel from selection chosen
 - <Esc> then “q” = the <Alt key> (usually followed by another character)
 - that is, if the O of OK is highlighted, OK can be selected by doing an <Alt+O>, which would be keystrokes <Esc> then q then O.
 - <Esc> then “!” = obtain the UNIX shell (type exit to return)

Verifying that Express recognizes the hardware

- 15 To verify that the Express software recognizes the communications adapter, perform the following steps:

Select Server Configuration by pressing the number 2. The following screen appears:

```

-----Server Configuration-----
I.D.   Description                               Status
!      Define Communications
;      Define LU6.2
?      Define Users/Sessions
&      Define Hardware
/      Define Job Entry Stations

```

- 16 Select Define Hardware. The following screen appears:

```
[~] Profile Edit Display Preferences Task Help
-----Define Hardware-----
Personal   Type      Name      Description
Status
Menu:      Config     Express   Default configuration for EXPRESS
<Esc><Ent> System      nortel    Computer System nortel
Cancel:    Adapter    nortel.hpa0  HPA Adapter
          Port      nortel.hpa0.0  HPA Port 0
Alt Key:   Port      nortel.hpa0.1  HPA Port 1
```

The screen should display the Adapter line indicating that the adapter has been recognized. If the Adapter lines do not appear, then check the hardware configuration using `express_adm` admin and/or check the settings on the adapter itself.

- 17 Select the Profile menu item and then choose Exit to return to the Express Manager window.
- 18 To complete the configuration of the Express software requires the completion of the following configurations:
 - a. defining the Node
 - b. defining the Link—there must be a link for each line to the host.
 - c. defining the Station
 - d. defining the LU
 - e. defining the 3270 Users/Sessions

Defining the node

- 19 From the Express Manager window, select Server Configuration by pressing the number 2.

The following screen appears:

```
-----Server Configuration-----
I.D.      Description      Status
!         Define Communications
;         Define LU6.2
?         Define Users/Sessions
&         Define Hardware
/         Define Job Entry Stations
```

- 20 Select Define Communications. The following screen appears:

```

-----Select Display-----
Please select the type of
Communications Profiles you wish to work with

<SNA>

-----
- Cancel -
-----

```

- 21 Ensure SNA is displayed, and press <Enter>.

The following screen appears:

```

----- Insert New SNA Node -----
Under Configuration Express
Name.....[ACME          ]
Description...[              ]

=====
- OK - - Cancel -
=====

```

- 22 The Name and Description are copied from the Domain Name and Location of the initial screen which was completed. Although the Name is required and cannot contain spaces, it is only used to name this configuration. The description is not required, but it can be helpful to describe the type of configuration such as “3270 SDLC configuration”.

Enter a Name and Description and press <Enter>.

The following screen appears.

```

-----SNA Node ACME-----
Network ID
[ ]
Control Point - XID... -
[ ]

Process...[nortel.kernel ]* - RTM... -

=====
- OK - - Cancel - - Alert Gen...-
=====

```

- 23 Enter the Network ID. This parameter is obtained from the customer and is usually in the VTAM gen on the mainframe called NETID. This parameter identifies the IVR system and is assigned by the mainframe.

Enter the Control Point. This parameter is obtained from the customer although it can be any value if the IVR system is talking to VTAM on the mainframe. Express requires this parameter be completed. This parameter identifies the IVR system and is assigned by the mainframe.

The Process parameter is only required if the express database is being shared among other Application processors (of which IVR 2.0/S is not). Leave the information in this field which appears here.

The Response Time Monitoring (RTM) is a feature which Netview on the host can use. There is normally nothing to change here.

The Alert feature is another item which can send messages to Netview on the host. There is normally nothing to change here.

Select XID and the following screen appears:

```
---SNA Node ACME - XID---
XID Format
(*) Format 3
( ) Format 0

XID Block...[E05 ]
XID ID.....[00000 ]

=====
-   OK   -   - Cancel -
=====
```

- 24 Ensure the XID Format is set to Format 3. Format 0 is an old format which is not normally used anymore unless the host is using old software.

The XID Block and XID ID together make up the XID. These parameters are obtained from the customer.

Complete the fields and press <Enter>.

The following screen appears:

```

-----EXPRESS Tree Builder-
If you wish to insert another profile,
please select:

For SNA Node ACME:
  <New Link...>

For Configuration Express:
  <New SNA Node...>

  <End Insert>

```

Defining the link

- 25 Leave the cursor on New Link and press <Enter>. The following screen appears:

```

-----Insert New Link-----

Under SNA Node ACME

Type
(*) SDLC
( ) Channel
( ) Token Ring
( ) QLLC

Name.....[                ]
Description...[                ]

=====
-   OK   -   - Cancel -
=====

```

- 26 Make sure the asterisk is beside (*) SDLC (use the arrow keys to move to new selections under Type and Space bar to place the asterisk next to the correct selection).

Tab to the Name and enter a meaningful name (no spaces allowed) which describes this configuration. This name is only used by the Express database.

Tab to the Description and enter a meaningful description. This name is only used by the Express database.

Press <Enter> and the following screen appears:

```

-----SDLC Link Trans5250-----
Node: ACME
Role      Mode... Topology
(*) Switched      ( ) Secondary
( ) Leased Point-to-Point ( ) Primary      - Class...
( ) Leased Multipoint (*) Negotiable
Ports...[nortel.hpa.0.0] * - Physical -
                                - Timers... -
=====
- OK - - Cancel -
=====
                                - TG Chars... -
                                =====

```

27 Select the correct Topology for this IVR System.

Switched is a dial-up link connecting two stations.

Leased Point-to-Point is a non-switched data link which directly connects to the host and the IVR system is the only station on the remote side.

Leased Multi-point is a non-switched data link which connects multiple secondary stations to a single host. That is, other 5250 terminals are on this line along with some sort of a splitter.

28 Select the correct Role for this IVR system.

Secondary—the local station is the secondary link station on this link.

Primary—the local station is the primary link station on this link.

Negotiable—the role of the local station will be negotiated at connect time. A leased multi-point line cannot be defined as negotiable.

29 Select the correct Port for this configuration. The software should automatically enter the “nodename.hpa0.0” item which signifies the first board and the first port, that is, nortel.hpa0.0 nortel.hpa0.1 would signify the second port of the HPA board. An entry of nortel.hpa0.0 1 tells Express that if link 0 does not work, automatically try port 1.

Select the Mode and the following screen appears:

```

-----SDLC Link ACME - Mode-----
Maximum Frame Size...[521  ]

Sequencing
(*) Normal      (mod 8)
( ) Extended   (mod 128)

Two Way Operation
(*) Alternate
( ) Simultaneous [ ] REJ

=====
-   OK   -       - Cancel -
=====

```

- 30 Select the Maximum Frame Size as specified by the host. Frame size specifies the maximum number of bytes in the I-field of an I-frame which may be transmitted or received on this data link. Standard sizes are 265 and 521, although the values may range from 0 to 32767.

Select the Sequencing as specified by the host. Sequencing specifies the type of SDLC sequencing used for this link. The local and remote link stations must agree on the value of this parameter, otherwise communication is not possible.

Normal sequencing allows a maximum of 7 SDLC I-frames to be sent in a single poll sequence; this is the most common mode.

Extended sequencing allows a maximum of 127 I-frames to be sent.

Two Way Operation—specifies SDLC mode of operation. The local and remote link stations must agree on the value of this parameter; otherwise communication is not possible.

Alternate—each link station takes turns transmitting data. There is no simultaneous data transmission; this is the most common mode. This is like Half Duplex communications.

Simultaneous—both link stations may transmit frames simultaneously. This is like Full Duplex communications.

Press <Enter> to return to the previous screen.

```
      Select Physical and the following screen appears:
-----SDLC Link ACME - Physical-----
Bit Encoding   RTS Control   Idle
(*) NRZ        (*) Toggled  ( ) Flag
( ) NRZI       ( ) Constant  (*) Mark

=====
-   OK   -   - Cancel -
=====
```

- 31 Set the Bit Encoding, RTS Control, and Idle parameters to the values as specified by the host. The local and remote link stations must agree on these values, otherwise communication is not possible.

Press <Enter> after the parameters have been set. The previous screen appears.

Select Timers and the following screen appears:

```
----- SDLC Link ACME - Timers -----

Timers (in seconds, immediate, or forever)
XID Negotiation...[forever  ]*
Inactivity.....[forever  ]*
RR Poll.....[0.4        ]*
Response.....[3.0        ]*
DSR Wait.....[120.0     ]*
CTS Wait.....[3.0        ]*
CTS Down.....[0.5        ]*
DSR Down.....[0.5        ]*

Retries (value, none, or unlimited)
XID Attempts      [20      ]*
Response Limit....[5       ]*

[ ] Disconnect upon inactivity timeout

=====
-   OK   -   - Cancel -
=====
```

- 32 Ensure the XID Negotiation and Inactivity timers are set to forever by pressing the down arrow when the cursor is on that field.

Press <Enter> after the parameters have been set. The previous screen appears.

- 33 Place the cursor on OK and press <Enter> to complete the Link Definition.

The following screen appears:

```

-----EXPRESS Tree Builder-----
If you wish to insert another profile,
please select:

For SDLC Link ACME:
  <New SDLC Station...>

For SNA Node ACME:
  <New Link...>

  <Up a Level>

  <End Insert>

```

- 34 Press <Enter> with the cursor on New SDLC Station. The following screen appears:

```

----- Insert New SDLC Station -----
Under SDLC Link IBMainframe
Name.....[                               ]
Description...[                               ]

=====
-   OK   -   - Cancel -
=====

```

Defining the station

- 35 A station needs to be defined for every 254 sessions. In the Name field enter a meaningful name (no spaces allowed) which describes this configuration. This name is only used by the Express database.

Tab to the Description and enter a meaningful description. This name is only used by the Express database.

Press <Enter> and the following screen appears:

```
----- SDLC Station TR -----  
  
Node: Nortel  
Link: ACME  
  
Connection Type  
(*) Host  
( ) Peer-to-Peer  
  
Secondary Station Address...[01 ]  
  
Send XID                                Remote Node Name  
Block...[E05 ]                        Network ID.....[NETID   ]  
ID.....[00000 ]                      Control Point...[HOST    ]  
  
[ ] Remote Node is Network Node  
  
[*] Restart connection if it fails  
=====
```

OK	Cancel	XID...
----	--------	--------

```
=====
```

- Connection Type—be sure to change this to Host for 3270.
- Fill in Send XID Block and ID from the customer host.

Fill in the Network ID and Control Point from the customer host.

Make sure an asterisk [*] is NOT next to Remote Node is Network Node.

- Make sure there is an asterisk [*] next to Restart connection if it fails.

36 Press <Enter> and the following screen appears:

```
-----EXPRESS Tree Builder-----  
  
If you wish to insert another profile,  
please select:  
  
For SDLC Station ACME:  
  <New Logical Unit...>  
  
For SDLC Link IBMainframe:  
  <New SDLC Station...>  
  
  <Up a Level>  
  
  <End Insert>
```

Defining the logical unit

- 37 Leave the cursor on New Logical Unit and press <Enter>. The following screen appears:

```

----- Insert New Logical Unit -----

Under SDLC Station 3270Stn

Type
(*) 3270 Display Pool
( ) 3270 Printer
( ) Local LU 6.2
( ) RJE LU Pool
( ) LU Type 0

Name.....[LU2]
Description...[ ]

=====
-   OK   -   - Cancel -
=====

```

- 38 Make sure the asterisk is next to 3270 Display Pool. Tab down to Name and Description and provide a descriptive name. Include in the name or description which LU this is (for example, LU2). Press <Enter> and the following screen appears:

```

----- 3270 Display Pool 3270pool -----

Node:      Nortel
Link:      IBMainframe
Station:   3270Stn

LU Addresses
[2]

=====
-   OK   -   - Cancel -   - Setup... -
=====

```

- 39 For the IVR system, one LU address will be defined for each separate session. Express software has the capability to specify all addresses on one LU, but the Meridian IVR software would not function when configured in this way.

The first address must start with 2, the next one 3, etc. Zero (0) and 1 are reserved.

Type a 2 in the LU Addresses field and press <Enter>. The following screen appears:

```
-----EXPRESS Tree Builder-----

If you wish to insert another profile,
please select:

For SDLC Station ACME:
  <New Logical Unit...>

  <Up a Level>

  <End Insert>
```

- 40 Continue selecting New Logical Unit until all Logical Units have been defined. When all LUs have been created, tab to End Insert and press <Enter>. The following screen appears:

```
[~] Profile Edit Display Preferences Task Help
----- Define Communications - SNA -----
Personal Type      Name      Description
Status
Menu:      Config    Express   Default configuration for EXPRESS
<Esc><Ent   Node      ACME      TR loc test
Cancel:     Indep. LUs  6.2 LUs   Using All Stations
  <Ctrl>^    LU         ACME      Control Point LU
Alt Key:    Link      ACME      3270 SDLC
  <Esc>q     Station    TR        3270 station
ShellEsc:   LU         LU2
Task: !     LU         LU3
Search:     LU         LU4
Down       LU         LU5
```

- 41 Select Profile and then Exit from the menu. The following screen appears:

```
[~] File Edit Preferences Window Task Help
-----EXPRESS Manager-----
Personal
Status      1. Control and Administration
Menu:        2. Server Configuration
<Esc><Ent    3. Desktop Configuration
Cancel:
  <Ctrl>^
Alt Key:
  <Esc>q
ShellEsc:
  <Esc>!
User:
```

Defining the 3270 users/sessions

- 42 Select 2. Server Configuration and press <Enter>. The following screen appears:

```

-----Server Configuration-----
      I.D.      Description      Status
      !         Define Communications
      ;         Define LU6.2
      ?         Define Users/Sessions
      &         Define Hardware
      /         Define Job Entry Stations

```

- 43 Select Define Users/Sessions. The following menu appears:

```

----- Select Display -----

Please select the type of
profiles you wish to work with

<Users>
<Terminal Emulation Services>

-----
- Cancel -
-----

```

- 44 Select Users. The following menu appears:

```

[-] Profile Edit Display Preferences Task Help
----- Define Users/Sessions - Users -----
Personal Type      Name      Description
Status
Menu:      All Users   All      Configuration: Express
<Esc><Ent>  Group      sysadm   System Administrators Group
Cancel:    User      express  Default user of EXPRESS
<Ctrl>^
Alt Key:
<Esc>q
ShellEsc:
<Esc>!

```

- 45 Move the cursor to highlight the User line which reads “Default user of EXPRESS”.

From the pull down menu select Profile and then New. The following screen appears:

```

----- Insert New Session -----

Under User express

Session Type
(*) 3270 Display
( ) 3270 Printer
( ) 5250
( ) Local

ID.....[a ]
Description...[ ]

=====
-   OK   -   - Cancel -
=====

```

Session Type—place an asterisk next to 3270 Display

ID—for the first session enter an “a”. Subsequent sessions will be “b”, “c”, etc. up to session ID “h” for the first user.

46 Press <Enter> and the following screen appears:

```

----- 3270 Session a -----

Defined for User express
Type: Display

[*] Displayable task
[ ] Graphics Supported

LU/Host.....[LU2          ]* - Printing... -
Language....[US          ]* -
Long Name    [           ]
Model        [2 ]*         - Initself... -
=====
-   OK   -   - Cancel -   - EHLLAPI... -
=====

```

47 Press <Enter> and the following screen appears:

```

-----EXPRESS Tree Builder-----

If you want to insert another profile,
```

```

please select:

For User express
  <New Session...>

  <Up a Level>

  <End Insert>

```

- 48 Continue selecting New Session and create session b, then c, etc., until eight sessions have been created. **ONLY EIGHT SESSIONS SHOULD BE CREATED PER USER.** More sessions will require another user.

When eight sessions have been created, select End Insert and the following screen appears:

```

[-] Profile Edit Display Preferences Task Help
----- Define Users/Sessions - Users -----
Personal Type      Name      Description
Status
Menu:      All Users    All      Configuration: Express
<Esc><Ent   Group      sysadm   System Administrators Group
Cancel:    User      express  Default user of EXPRESS
<Ctrl>^    Session    a        session a
Alt Key:    Session    b        session b
<Esc>q     Session    c        session c
ShellEsc:   Session    d        session d
<Esc>!     Session    e        session e
Task: ;     Session    f        session f
Down       Session    g        session g
           Session    h        session h

```

- 49 If more than eight sessions need to be configured, add a new user of “expressa” by performing the following steps:

- a. Place the cursor on the “Group” line.
- b. Select Profile from the menu.
- c. Select New from the Profile menu.

The following screen appears:

```
----- Group User sysadm -----
```

```
Insert New
  <Session>
  <User>
```

```
-----
- Cancel -
-----
```

d. Place the cursor on User and press <Enter>. The following screen appears:

```
----- Insert New User -----
```

```
Under User Group sysadm
```

```
Name.....[                ]
Full Name...[                ]
```

```
=====
- OK - - Cancel -
=====
```

e. Enter a name of expressa for the second user which will support the next eight sessions, expressb for the third user which will support the next eight sessions, etc. Press <Enter>. The following screen appears:

```
----- User expressa -----
```

```
Group: sysadm
Supervisory Tasks
```

```
-----
+ Control Communications & Diagnostics
+ Display Log
+ Display Trace
+ Administer Configurations
+ Administer Log
+ Define Communications
+ Define LU 6.2
+ Customize Messages
+ Define Users/Sessions
-----
```

```
'+' defined for
Group or All Users - Session Support... -
-----
- OK - - Cancel - - Password... -
=====
```


f. Press <Enter> to accept all the Supervisory Tasks. The following menu appears:

```

-----EXPRESS Tree Builder-----
If you wish to insert another profile,
please select:

For User expressa
  <New Session...>

For User Group sysadm:
  <New Session...>
  <New User...>

  <Up a Level>

  <End Insert>

```

g. With the cursor on New Session, press <Enter> to create a new session for the new express user.

```

----- Insert New Session -----
Under User expressa

Session Type
(*) 3270 Display
( ) 3270 Printer
( ) 5250
( ) Local

ID.....[i ]
Description...[                               ]

=====
-   OK   -   - Cancel -
=====

```

- Session Type—place an asterisk next to 3270
- ID—for the first session of the second user enter an “i”. Subsequent sessions of the second user will be “j”, “k”, etc. up to session
- ID “p” for the second user. For the third user, use ID q, r, s, etc. User ID's may also be uppercase letters.

h. Press <Enter> and the following screen appears:

```
----- 3270 Session i -----  
  
Defined for User expressa  
Type: Display  
  
[*] Displayable task  
[ ] Graphics Supported  
  
LU/Host.....[LU10          ]* ~ Printing... ~  
Language....[US          ]* ~~~~~~  
Long Name   [          ]  
Model       [2 ]* ~~~~~~  
              ~ Initself... ~  
              ~~~~~~  
~~~~~  
~   OK   ~   ~ Cancel ~   ~ EHLAPI... ~  
~~~~~
```

i. Press <Enter> and the following screen appears:

```
-----EXPRESS Tree Builder-----  
  
If you wish to insert another profile,  
please select:  
  
For User expressa  
  <New Session...>  
  
  <Up a Level>  
  
  <End Insert>
```

j. Continue selecting New Session and create session j, then k, etc., until eight sessions have been created. **ONLY EIGHT SESSIONS SHOULD BE CREATED PER USER.** More sessions will require another user.

When eight sessions have been created, select End Insert and the following screen appears:

```
[~] Profile Edit Display Preferences Task Help
----- Define Users/Sessions - Users -----
Personal Type      Name      Description
Status
Menu:      All Users  All      Configuration: Express
<Esc><Ent  Group      sysadm   System Administrators Group
Cancel:    User      express  Default user of EXPRESS
<Ctrl>^    Session    a        session a
Alt Key:    Session    b        session b
<Esc>q      Session    c        session c
ShellEsc:   Session    d        session d
<Esc>!      Session    e        session e
Task: ;     Session    f        session f
Down        Session    g        session g
            Session    h        session h
            User      expressa Expressa user
            Session    i        session i
            Session    j        session j
```

After the configuration is completed, exit the Express Manager by choosing Exit from the Profile pull-down menu.

Proceed to **“Testing 3270 and 5250 host communications”** on page B-53.

Configuring 3270 for Token Ring host communications

The Express software pre-defines a user called express in the Express database. When configuring the hosts communications software, the root log in can be used.

- 1 Log into the AP as root.
- 2 Enter the root password at the prompt.
- 3 The /etc/profile file contains all the commands which are executed upon login for all non-root users.
- 4 To allow root to have all the environment variables set up which normal users will have, enter the following command:

./etc/profile

- 5 The Express software automatically starts at boot time and must be started before the configuration can be accomplished.

- 6 To verify that it has started, enter the following command:

express_adm check

The system should display

```
# express_adm check

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agent running:
  root    502      1  0 10:15:08 ?          0:00 agent
executive running:
  root    498      1  0 10:15:05 ?          0:00 executive
watchdog running:
  root    504      1  0 10:15:08 ?          0:00 watchdog
cdmserver running:
  root    367      1  0 10:14:51 ?          0:07 cdmserver
nortel:/u/express/db/cdmst
Checking EXPRESS database divisions ...
Checking EXPRESS clients ...
#
```

Four daemons should appear in the running state. If the information above does not display, then express is not running. The express software may be started with the following command:

express_adm start

- 7 Begin the Express configuration by entering the following command:

express -u express

If the error “express: not found” appears, issue the command in step 5 above (. /etc/profile).

If the error

```
initializing display capabilities Terminal type "ansi" not
defined for user "express in the  EXPRESS database.DCIT
failed...EXPRESS terminating
```

appears, then the terminal type is not set up for your login session. The valid terminal types available for Express can be obtained with the following command:

ls_screens -u express?

Set the terminal type to a valid terminal type using the following command:

TERM=vt220;export TERM

- 8 The system displays the following screen:

```
Initializing display capabilities...
Retrieving database information for express.....

-----EXPRESS Global Options-----
                Welcome to EXPRESS
This first time that you run EXPRESS, you are asked to select initial
values for global parameters and options. You are also asked to
characterize your planned usage of EXPRESS features. EXPRESS
will then make available just those tasks and displays you need to
utilize these selected features.
You may change this information later through Set Global Options.

=====
-  OK  -
=====
```

- 9 Press <Enter> to display the following screen. This screen only appears the first time express is run.

```
-----EXPRESS Global Options-----  
An EXPRESS domain is a single computer or a group of networked  
computers on which EXPRESS is installed. EXPRESS provides  
central, domain-wide operation and administration.  
Please enter the following domain identification. This information  
is attached to configuration backups and communication traces.  
It is also the default SNA Node identification.  
Domain Name: [   ]  
Location:    [   ]  
  
=====
```

```
~Continue~  
=====
```

- 10 The Domain Name and Location are not required for a stand-alone configuration (they are required for a network configuration), but since the information will appear in traces, enter a meaningful name such as the name of this company for the domain name and press <Enter>.

- 11 The following screen appears:

```
-----EXPRESS Desktop Features-----  
Please select the features of the EXPRESS Integrated  
Desktop that you plan to use.  
  
Terminal Emulation  Other Services  
[*] 3270 Display    [ ] Remote Job Entry  
[ ] 3270 Printing   [ ] CPI-C Transaction Programs  
[ ] 5250 Display  
  
=====
```

```
~Continue~  ~ Options...~  ~Security...~  
=====
```

- 12 Press Space to place an asterisk in the 3270 Display selection.

Press <Enter> to proceed to the next screen.

```
-----EXPRESS Desktop Features-----
Please select the following Server types that
EXPRESS Integrated Desktop will use.

[*] EXPRESS
[ ] Netware for SAA
[ ] Telnet Host

=====
~ Continue ~
=====

-----
~ Back ~
-----
```

- 13 Ensure the asterisk is in the EXPRESS selection and then press <Enter> to proceed to the following screen.

```
-----EXPRESS Server Features-----
Please select the features of the EXPRESS SNA Server
that you plan to use.

[ ] LU 6.2 - Needed for CPI-C, 5250, and IP/LU6.2
[ ] X.25 - Needed for QLLC, XLI, X.PAD, and IP/X.25
[ ] IP Router - Needed for IP/LU6.2 and IP/X.25

Please select the client types supported by the
EXPRESS SNA Server.

[*] EXPRESS
[ ] Telnet 3270/5250
[ ] Netware for SAA

=====
~ Continue ~
=====
```

- 14 Make sure the asterisk is in the EXPRESS selection and press <Enter> to proceed to the next screen.

```
[~] File Edit Preferences Window Task Help
-----EXPRESS Manager-----
Personal
Status      1. Control and Administration
Menu:       2. Server Configuration
<Esc><Ent   3. Desktop Configuration
Cancel:
<Ctrl>^
Alt Key:
<Esc>q
ShellEsc:
<Esc>!
```

Notes:

- 1 If any of the parameters which initially displayed need to be changed, they can be found under the Set Global Options menu selection of the Preferences menu item.
- 2 The layout of the EXPRESS Manager screen contains the function of the keys to the left of the vertical line, three selections to the right of the vertical line, and menu item selections along the top. The function keys which display to the left of the vertical line will vary depending on which terminal is being emulated during this configuration. The meanings of the function keys in the example above are:
 - <Esc> then <Enter> = allow using the Menu
 - <Ctrl+^> = cancel from selection chosen
 - <Esc> then “q” = the <Alt key> (usually followed by another character)
 - That is, if the O of OK is highlighted, OK can be selected by doing an <Alt/O>, which would be keystrokes <Esc> then q then O.
 - <Esc> then “!” = obtain the UNIX shell (type exit to return)

Verifying that Express recognizes the hardware

- 15 To verify that the Express software recognizes the communications adapter, perform the following steps:

Select Server Configuration by pressing the number 2.

The following screen appears:

```

-----Server Configuration-----
I.D.   Description                               Status
!      Define Communications
;      Define LU6.2
?      Define Users/Sessions
&      Define Hardware
/      Define Job Entry Stations

```

- 16 Select Define Hardware. The following screen appears:

```

[-] Profile Edit Display Preferences Task Help
-----Define Hardware-----
Personal  Type      Name      Description
Status
Menu:     Config     Express   Default configuration for EXPRESS
<Esc><Ent> System     nortel    Computer System nortel
Cancel:   Adapter    nortel.tr Token Ring Adapter
<Ctrl>^   Port       nortel.tr Token Ring Port
Alt Key:

```

The screen should display the Adapter line indicating that the adapter has been recognized. If the Adapter lines do not appear, then check the hardware configuration using `express_adm` admin and/or check the settings on the adapter itself.

- 17 Select the Profile menu item and then choose Exit to return to the Express Manager window.
- 18 To complete the configuration of the Express software requires the completion of the following configurations:
- defining the Node
 - defining the Link—there must be a link for each line to the host
 - defining the Station
 - defining the LUs

g. defining the 3270 Users/Sessions

Defining the node

- 19 From the Express Manager window, select Server Configuration by pressing the number 2.

The following screen appears:

```
-----Server Configuration-----
I.D.      Description              Status
!         Define Communications
;         Define LU6.2
?         Define Users/Sessions
&         Define Hardware
/         Define Job Entry Stations
```

- 20 Select Define Communications. The following screen appears:

```
-----Select Display-----
Please select the type of
Communications Profiles you wish to work with

<SNA>

-----
- Cancel -
-----
```

- 21 Ensure SNA is displayed and press <Enter>.

The following screen appears:

```
----- Insert New SNA Node -----
Under Configuration Express
Name.....[ACME          ]
Description...[              ]

=====
- OK      -   - Cancel -
=====
```

- 22 The Name and Description are copied from the Domain Name and Location of the initial screen which was completed. Although the Name is required and cannot contain spaces, it is only used to name this configuration. The description is not required, but it can be helpful to describe the type of configuration such as “3270 Token Ring configuration”.

Enter a Name and Description and press <Enter>.

The following screen appears:

```

-----SNA Node ACME-----
Network ID
[          ]
Control Point      -   XID...   -
[          ]
Process...[nortel.kernel  ]*   -   RTM...   -
=====
- OK -   - Cancel -   - Alert Gen...-
=====

```

- 23 Enter the Network ID. This parameter is obtained from the customer and is usually in the VTAM gen on the mainframe called NETID. This parameter identifies the IVR system and is assigned by the mainframe.

Enter the Control Point. This parameter is obtained from the customer although it can be any value if the IVR system is talking to VTAM on the mainframe. Express requires this parameter be completed. This parameter identifies the IVR system and is assigned by the mainframe.

The Process parameter is only required if the express database is being shared among other Application processors (of which IVR 2.0/S is not). Leave the information in this field which appears here.

The Response Time Monitoring (RTM) is a feature which Netview on the host can use. There is normally nothing to change here.

The Alert feature is another item which can send messages to Netview on the host. There is normally nothing to change here.

Select XID and the following screen appears:

```
---SNA Node ACME - XID---
XID Format
(*) Format 3
( ) Format 0

XID Block...[E05 ]
XID ID.....[00000 ]

=====
-   OK   -   - Cancel -
=====
```

- 24 Ensure the XID Format is set to Format 3. Format 0 is an old format which is not normally used anymore unless the host is using old software.

The XID Block and XID ID together make up the XID. These parameters are obtained from the customer.

Complete the fields and press <Enter>.

- 25 Place the cursor on OK and press <Enter>.

The following screen appears:

```
-----EXPRESS Tree Builder-
If you wish to insert another profile,
please select:

For SNA Node ACME:
  <New Link...>

For Configuration Express:
  <New SNA Node...>

  <End Insert>
```

Defining the link

- 26 Leave the cursor on New Link and press <Enter>. The following screen appears:

```

-----Insert New Link-----

Under SNA Node ACME

Type
( ) SDLC
( ) Channel
(*) Token Ring
( ) QLLC

Name.....[                ]
Description...[                ]

=====
-   OK   -   -   Cancel   -
=====

```

- 27 Make sure the asterisk is beside (*) Token Ring (use the arrow keys to move to new selections under Type and Space bar to place the asterisk next to the correct selection).

Tab to the Name and enter a meaningful name (no spaces allowed) which describes this configuration. This name is only used by the Express database.

Tab to the Description and enter a meaningful description. This name is only used by the Express database.

Press <Enter> and the following screen appears:

```
----- Token Ring Link TFNode -----  
  
Node: ACME  
  
Local MAC Address  
( ) Use Default  
(*) Assign Address      Address      [          ]  
  
Port  
[nortel.tr      ]*      ~ Mode... ~  
  
[ ] Connection Network Link      ~ Class... ~  
                                ~ Timers... ~  
                                ~ TG Char... ~  
===== ~ OK ~ ~ Cancel ~  
=====
```

Local MAC Address—this is the 12-digit hexadecimal address which will be used when communicating with the host. “Use Default” will cause the system to obtain the unique MAC address which is burned into each LAN board. “Assign Address” will require the entering of the MAC address on this screen. It is recommended that “Assign Address” be chosen if a MAC address can be obtained from the customer. The advantage of assigning the address on this screen is that if the Madge card is ever replaced, the MAC address does not have to be changed.

Port is the name given to the Madge adapter port.

28 Select the Mode and the following screen appears:

```
----- Token Ring Link TRNode - Mode -----  
  
Receive Window.....[33  ]  
Transmit Window.....[33  ]  
Maximum Frame Size.....[3849 ]  
Number Frames For Acknowledgement....[1  ]  
Number Frames To Accept While Busy...[0  ]  
  
[ ] Dynamic Windowing Supported  
[*] Quit When Reach Retry Limit  
[ ] Send FRMR If Unsolicited Final Bit  
[*] Send FRMR If Bad Send Sequence Number  
===== ~ OK ~ ~ Cancel ~  
=====
```

- 29 Select the Receive and Transmit Window as specified by the host. This is the maximum frames which can be sent and received before acknowledgment.

Select the Maximum Frame Size as specified by the host. Frame size specifies the maximum number of bytes in the I-field of an I-frame which may be transmitted or received on this data link.

Press <Enter> to return to the previous screen.

- 30 Select Class and the following screen appears:

```
-----Token Ring Link Trans5250 - Class-----
Class of Service...[          ]

=====
-   OK   -   - Cancel -
=====
```

- 31 Enter a Class of Service, which is a name indicating the type of LU 6.2 conversations which should be carried on this link. When a conversation is allocated, the mode to be used might name a Class of Service. If there are multiple data links leading to the destination LUs node, Express will choose the data link which matches the Class of Service specified for the mode.

Press <Enter> to return to the previous screen.

- 32 Select Timers and the following screen appears:

```
----- Token Ring Link TFNode - Timers -----

Timers (in seconds, immediate, or forever)
REJ.....[2.0      ]*
Remote Busy.....[10.0    ]*
Inactivity.....[forever ]*
XID Negotiation...[forever ]*
Response.....[2.0      ]*
Acknowledgement...[0.1    ]*

Retries (value, none, or unlimited)
XID Attempts.....[40     ]*
Response Limit....[30     ]*

=====
-   OK   -   - Cancel -
=====
```

33 Ensure the XID Negotiation and Inactivity timers are set to forever.

Press <Enter> after the parameters have been set. The previous screen appears.

34 Select TG Char and the following screen appears:

```
----- Token Ring Link TFNode - TG Characteristics -----

Security                                Propagation Delay
(*) Non Secure                          ( ) Minimum
( ) Public Switched Network             (*) Local Area Network
( ) Underground Cable                  ( ) Telephone
( ) Secure Conduit                     ( ) Packet Switched Network
( ) Guarded Conduit                    ( ) Satellite
( ) Encrypted                           ( ) Maximum
( ) Guarded Radiation

Ring Speed      Cost Per Connect Time...[128 ]   User Defined
( ) 4 Mbps      Cost Per Byte.....[128 ]       1...[128 ]
(*) 16 Mbps                                           2...[128 ]
                                           3...[128 ]

=====
-   OK   -   -   Cancel   -
=====
```

Ensure the Ring Speed is set at the correct speed. Place the cursor on OK and press <Enter> to return to the previous screen.

35 Place the cursor on OK and press <Enter> to complete the Link Definition.

The following screen appears:

```
-----EXPRESS Tree Builder-----
If you wish to insert another profile,
please select:

For Token Ring Link ACME:
  <New Token Ring Station...>

For SNA Node ACME:
  <New Link...>

  <Up a Level>

  <End Insert>
```

36 Press <Enter> with the cursor on New Token Ring Station. The following screen appears:


```
----- Insert New Token Ring Station -----
```

```
Under Token Ring Link
```

```
Name.....[ACME ]
```

```
Description...[ ]
```

```
=====
-   OK   -   -   Cancel   -
=====
```

Defining the station

- 37 A station needs to be defined for every 254 sessions. In the Name field enter a meaningful name (no spaces allowed) which describes this configuration. This name is only used by the Express database.

Tab to the Description and enter a meaningful description. This name is only used by the Express database.

Press <Enter> and the following screen appears:

```
----- Token Ring Station Transtation -----
```

```
Node: ACME
```

```
Link: TFNode
```

```
Connection Type
```

```
(*) Host
```

```
( ) Peer-to-Peer
```

```
Local SAP Value.....[04 ]
```

```
Remote SAP Value.....[04 ]
```

```
Local MAC Address.....123456789ABC
```

```
Remote MAC Address...[ ]
```

```
Send XID
```

```
Block...[E05 ]
```

```
ID.....[00000 ]
```

```
Remote Node Name
```

```
Network ID.....[NET ]
```

```
Control Point...[ ]
```

```
[ ] Remote Node is Network Node
```

```
[*] Restart connection if it fails
```

```
=====
-   OK   -   -   Cancel   -
```

```
=====
```

```
-----
-   XID...   -
```

```
-----
```

```
-----
-   Priority...   -
```

```
-----
```

- Connection Type—be sure to change this to Host for 3270.
- Local and Remote SAP Value—obtain from the customer host.
- Local MAC Address—comes from what was entered for the Link.
- Remote MAC Address—obtain from the customer host.

Fill in Send XID Block and ID from the customer host.

Fill in the Network ID and Control Point from the customer host. Make sure an asterisk [*] is NOT next to Remote Node is Network Node.

Make sure an asterisk [*] is next to Restart connection if it fails.

38 Place the cursor on XID and press <Enter> to display the screen below:

```
----- Token Ring Station Transtation - XID -----  
  
XID Format      Role  
(*) Format 3    ( ) Secondary  
( ) Format 0    ( ) Primary  
                (*) Negotiable  
  
[ ] Verify Adjacent Node Identity  
  
=====  -----  
-   OK   -  - Cancel -  
=====  -----
```

Ensure the XID Format is set to Format 3. Format 0 is an old format which is not normally used anymore unless the host is using old software. Make sure Role is set to match what the customer host requires.

- Secondary—the local station is the secondary link station on this link.
- Primary—the local station is the primary link station on this link.
- Negotiable—the role of the local station will be negotiated at connect time.

Complete the fields and press <Enter> to return to the previous screen.

39 Place the cursor on OK and press <Enter>.

40 Press <Enter> and the following screen appears:

```

-----EXPRESS Tree Builder-----

If you wish to insert another profile,
please select:

For Token Ring Station Transtation:
  <New Logical Unit...>

For Token Ring Link TFNode:
  <New Token Ring Station...>

  <Up a Level>

  <End Insert>

```

Defining the logical units

- 41 Leave the cursor on New Logical Unit and press <Enter>. The following screen appears.

```

----- Insert New Logical Unit -----

Under SDLC Station 3270Stn

Type
(*) 3270 Display Pool
( ) 3270 Printer
( ) Local LU 6.2
( ) RJE LU Pool
( ) LU Type 0

Name.....[LU2                ]
Description...[                ]

=====
-   OK   -   - Cancel -
=====

```

- 42 Make sure the asterisk is next to 3270 Display Pool. Tab down to Name and Description and provide a descriptive name. Include in the name or description which LU this is, for example, LU2 (the first LU will be address 2).

Press <Enter> and the following screen appears:

```
----- 3270 Display Pool 3270pool -----  
  
Node:      Nortel  
Link:      IMainframe  
Station:   3270Stn  
  
LU Addresses  
[2                               ]  
  
=====  -----  -----  
~   OK   ~   ~ Cancel ~   ~ Setup... ~  
=====  -----  -----
```

- 43 For the IVR system, one LU address will be defined for each separate session. Express software has the capability to specify all addresses on one LU, but the Meridian IVR software won't function when configured in this way.

The first address must start with 2, the next one 3, etc. Zero (0) and 1 are reserved.

Type a 2 in the LU Addresses field and press <Enter>. The following screen appears:

```
-----EXPRESS Tree Builder-----  
  
If you wish to insert another profile,  
please select:  
  
For Token Ring Station TRStation:  
  <New Logical Unit...>  
  
  <Up a Level>  
  
  <End Insert>
```

- 44 Continue selecting New Logical Unit until all Logical Units have been defined. When all LUs have been created, tab to End Insert and press <Enter>. The following screen appears:

```
[~] Profile Edit Display Preferences Task Help
----- Define Communications - SNA -----
Personal   Type      Name      Description
Status
Menu:      Config     Express   Default configuration for EXPRESS
<Esc><Ent>  Node        ACME      TR loc test
Cancel:    Indep. LUs   6.2 LUs   Using All Stations
<Ctrl>^    LU          ACME      Control Point LU
Alt Key:   Link        ACME      3270 SDLC
<Esc>q    Station     TR        3270 station
ShellEsc:  LU          LU2
Task: !    LU          LU3
Search:    LU          LU4
Down       LU          LU5
```

- 45 Select Profile and then Exit from the menu. The following screen appears:

```
[~] File Edit Preferences Window Task Help
-----EXPRESS Manager-----
Personal
Status      1. Control and Administration
Menu:
<Esc><Ent>   2. Server Configuration
Cancel:      3. Desktop Configuration
<Ctrl>^
Alt Key:
<Esc>q
ShellEsc:
<Esc>!
User:
```

Defining the 3270 users/sessions

- 46 Select 2. Server Configuration and press <Enter>. The following screen appears:

```
-----Server Configuration-----
I.D.      Description      Status
!         Define Communications
;         Define LU6.2
?         Define Users/Sessions
&         Define Hardware
/         Define Job Entry Stations
```

- 47 Select Define Users/Sessions. The following menu appears:

```
----- Select Display -----  
  
Please select the type of  
profiles you wish to work with  
  
<Users>  
<Terminal Emulation Services>  
  
-----  
- Cancel -  
-----
```

48 Select Users. The following menu appears:

```
[~] Profile Edit Display Preferences Task Help  
----- Define Users/Sessions - Users -----  
Personal Type Name Description  
Status  
Menu: All Users All Configuration: Express  
<Esc><Ent Group sysadm System Administrators Group  
Cancel: User express Default user of EXPRESS  
<Ctrl>^  
Alt Key:  
<Esc>q  
ShellEsc:  
<Esc>!  
Task: ;  
Down
```

49 Move the cursor to highlight the User line which reads “Default user of EXPRESS”.

From the pull down menu select Profile and then New. The following screen appears:

```

----- Insert New Session -----

Under User express

Session Type
(*) 3270 Display
( ) 3270 Printer
( ) 5250
( ) Local

ID.....[a ]
Description...[ ]

=====
-   OK   -   - Cancel -
=====

```

Session Type—place an asterisk next to 3270 Display

ID—for the first session enter an “a”. Subsequent sessions will be “b”, “c”, etc. up to session ID “h” for the first user.

50 Press <Enter> and the following screen appears:

```

----- 3270 Session a -----

Defined for User express
Type: Display

[*] Displayable task
[ ] Graphics Supported

LU/Host.....[LU2           ]* - Printing... -
Language....[US           ]* -
Long Name    [             ] -
Model        [2 ]*         - Initself... -
=====
-   OK   -   - Cancel -   - EHLAPI... -
=====

```

51 Press <Enter> and the following screen appears:

```
-----EXPRESS Tree Builder-----  
  
If you wish to insert another profile,  
please select:  
  
For User express  
  <New Session...>  
  
  <Up a Level>  
  
  <End Insert>
```

52 Continue selecting New Session and create session b, then c, etc., until eight sessions have been created. **ONLY EIGHT SESSIONS SHOULD BE CREATED PER USER.** More sessions will require another user.

When eight sessions have been created, select End Insert and the following screen appears:

```
[~] Profile Edit Display Preferences Task Help  
----- Define Users/Sessions - Users -----  
Personal Type      Name      Description  
Status  
Menu:      All Users  All      Configuration: Express  
<Esc><Ent> Group      sysadm   System Administrators Group  
Cancel:    User      express  Default user of EXPRESS  
<Ctrl>^    Session  a        session a  
Alt Key:   Session  b        session b  
<Esc>q     Session  c        session c  
ShellEsc:  Session  d        session d  
<Esc>!     Session  e        session e  
Task: ;    Session  f        session f  
Down      Session  g        session g  
          Session  h        session h
```

53 If more than eight sessions need to be configured, add a new user of “expressa” by performing the following steps:

- a. Place the cursor on the “Group” line.
- b. Select Profile from the menu.
- c. Select New from the Profile menu.

The following screen appears:


```
----- Group User sysadm -----
```

```
Insert New
<Session>
<User>
```

```
-----
~ Cancel ~
-----
```

d. Place the cursor on User and press <Enter>. The following screen appears:

```
----- Insert New User -----
```

```
Under User Group sysadm
```

```
Name.....[ ]
Full Name...[ ]
```

```
=====
~ OK ~ ~ Cancel ~
=====
```

e. Enter a name of expressa for the second user which will support the next eight sessions, expressb for the third user which will support the next eight sessions, etc. Press <Enter>. The following screen appears:

```
----- User expressa -----
```

```
Group: sysadm
Supervisory Tasks
```

```
-----
+ Control Communications & Diagnostics
+ Display Log
+ Display Trace
+ Administer Configurations
+ Administer Log
+ Define Communications
+ Define LU 6.2
  Customize Messages
+ Define Users/Sessions
-----
```

```
'+' defined for
Group or All Users ~ Session Support... ~
```

```
=====
~ OK ~ ~ Cancel ~ ~ Password... ~
=====
```

f. Press <Enter> to accept all the Supervisory Tasks. The following menu appears:

```
-----EXPRESS Tree Builder-----
If you wish to insert another profile,
please select:

For User expressa
  <New Session...>

For User Group sysadm:
  <New Session...>
  <New User...>

  <Up a Level>

  <End Insert>
```

g. With the cursor on New Session, press <Enter> to create a new session for the new express user.

```
----- Insert New Session -----
Under User expressa

Session Type
(*) 3270 Display
( ) 3270 Printer
( ) 5250
( ) Local

ID.....[i ]
Description...[                                     ]

=====
-   OK   -   - Cancel -
=====
```

Session Type—place an asterisk next to 3270 ID—for the first session of the second user enter an “i”. Subsequent sessions of the second user will be “j”, “k”, etc. up to session ID “p” for the second user. For the third user, use ID q, r, s, etc. User IDs may also be uppercase letters.

h. Press <Enter> and the following screen appears:

```

----- 3270 Session i -----

Defined for User expressa
Type: Display

[*] Displayable task
[ ] Graphics Supported

LU/Host.....[LU10                ]* ~ Printing... ~
Language....[US                  ]* ~-----~
Long Name    [                    ] ~-----~
Model        [2 ]*                ~ Initself... ~
-----~
~   OK   ~   ~ Cancel ~           ~ EHLAPI... ~
-----~

```

i. Press <Enter> and the following screen appears:

```

-----EXPRESS Tree Builder-----

If you wish to insert another profile,
please select:

For User expressa
  <New Session...>

  <Up a Level>

  <End Insert>

```

j. Continue selecting New Session and create session j, then k, etc., until eight sessions have been created. **ONLY EIGHT SESSIONS SHOULD BE CREATED PER USER.** More sessions will require another user.

When eight sessions have been created, select End Insert and the following screen appears:

```
[~] Profile Edit Display Preferences Task Help
----- Define Users/Sessions - Users -----
Personal Type      Name      Description
Status
Menu:      All Users  All      Configuration: Express
<Esc><Ent>  Group    sysadm   System Administrators Group
Cancel:    User     express  Default user of EXPRESS
<Ctrl>^    Session  a        session a
Alt Key:    Session  b        session b
<Esc>q     Session  c        session c
ShellEsc:   Session  d        session d
<Esc>!     Session  e        session e
Task: ;     Session  f        session f
Down       Session  g        session g
           Session  h        session h
           User     expressa Expressa user
           Session  i        session i
           Session  j        session j
```

After the configuration is completed, exit the Express Manager by choosing Exit from the Profile pull down menu.

Proceed to **“Testing 3270 and 5250 host communications”** on page B-53.

Testing 3270 and 5250 host communications

- 1 After the Express software is configured, issue the following commands to restart Express:

express_admin stop(stop the interface)

express_admin start(start the interface)

express_admin check(check that daemons are running)

express -u express(start Express)

The following menu appears:

```
[~] File Edit Preferences Window Task Help
-----EXPRESS Manager-----
Personal
Status
Menu:      1. Interactive Sessions
           2. Control and Administration
           3. Server Configuration
Cancel:    4. Desktop Configuration
           <Esc><Ent>
           <Ctrl>^
Alt Key:
           <Esc>q
ShellEsc:
           <Esc>!
User:
```

- 2 Select Control and Administration. The following menu appears:

```
----- Control and Administration -----
I.D.      Description                               Status
@         Control Communications & Diagnostics
$         Display Log
*         Display Trace
'         Administer Configurations
-         Administer Log
```

- 3 Select Control Communications & Diagnostics. The following screen appears:

```
----- Select Display -----  
  
Please select the type of  
objects you wish to work with  
  
<Link, Station>  
<Interactive Session>  
<LU 6.2 Session>  
  
-----  
- Cancel -  
-----
```

- 4 Select Link, Station and the following screen appears:

```
[~] Control Edit Display Preferences Task Help  
--- Control Communications & Diagnostics - Links, Stations ----  
Personal Type Name Status Description  
Status  
Menu: Config Express Default configuration  
<Esc><Ent Node ACME Enabled ACME  
Cancel: Indep. LUs 6.2 LUs Using All Stations  
<Ctrl>^ LU Nortel Inactive Control Point LU  
Alt Key: Link ACME Inactive 5250 SDLC  
<Esc>q Station TR Inactive 5250 station  
ShellEsc:  
<Esc>!  
Task: @  
Search:  
Down
```

- 5 By selecting Activate from the Control pull down menu and moving the cursor to each line, activate the following lines if they do not show Enabled:

- Node
- Control Point LU - ONLY FOR 5250 - always configured by Express
- LU - Control Point LU - ONLY FOR 5250 - always configured by Express
- Link
- Station

The following confirmation screen appears:

```

----- Confirm Activate -----
Activate SDLC Link ACME?

=====
- Activate -   - Cancel -
=====

```

The Control Point LU line only has to activated for 5250. Activate the Node, the Link, and the Station.

- 6 Press <Enter> with the cursor on Activate. The screen will display “Operation in Progress” and finally change to “Successful completion”. Press <Enter> with the cursor on Close to close this window.

```

===== Activate SDLC Link ACME =====
Successful completion

          -----
          - Close -
          -----

```

- 7 The Status should change to Enabled if a successful activation occurs. Continue changing the status on each line which is Inactive. If the Link becomes enabled, enable the station also. When the Station become enabled, this means a successful SNRM or SABME has been passed between the host and the IVR system.

If the Status does not change to Enabled, check the Express Log. The Express Log can be obtained by choosing Display Log from the following menu:

```

----- Control and Administration -----
      I.D.      Description      Status
      @      Control Communications & Diagnostics
      $      Display Log
      *      Display Trace
      '      Administer Configurations
      -      Administer Log

```

The Log solves most of the problems by providing information on where the problem is occurring.

Note: To modify an item in configuration requires that the item be Deactivated in the Control and Communications screen.

- 8 Once the Status's have become Enabled, an interactive session can be displayed by first returning to the following menu:

```
[~] File Edit Preferences Window Task Help
-----EXPRESS Manager-----
Personal
Status
Menu:      1. Interactive Sessions
           2. Control and Administration
<Esc><Ent>  3. Server Configuration
Cancel:    4. Desktop Configuration
<Ctrl>^
Alt Key:
<Esc>q
ShellEsc:
<Esc>!
User:
```

- 9 Select Interactive Sessions. The following menu appears listing all the Sessions which were configured:

```
----- Interactive Sessions -----
      I.D.      Description      Status
      a        session a
      b        session b
      c        session c
```

- 10 Place the cursor on the first session line and press <Enter>. The system attempts to bring up a terminal session from the host. A screen similar to the following should appear with a status line along the bottom:

```
[~] File Edit Preferences Window Task Help
----- Session a -----
```

```
INACTIVE  a 2          COMM505          LTT=:00.0
          ^^
          |____Session status|____Comm status
```


3270 Session Status messages and meanings can be found in Chapter 4 of the *Express Terminal Emulator User's Guide*.

5250 Session Status messages can include:

- X—System waiting
- Start—5250 session activation in progress (CPI-C allocation in progress)
- Active—5250 session activated

Communications Check Codes (for example, COMM505) meanings can be found in Appendix C of the *Express Terminal Emulator User's Guide*.